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P201 -PRE-OPERATIVE MYOCARDIAL PERFUSION SCANS AND POST KIDNEY TRANSPLANT COMPLICATIONS: A SINGLE-CENTRE ANALYSIS

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INTRODUCTION. Published society guidelines differ in their recommendations for routine cardiac imaging among asymptomatic kidney transplant candidates leading to heterogenous clinical practise. At our transplant centre, myocardial perfusion scans are routinely performed for all asymptomatic kidney transplant candidates who meet eligibility criteria; age 50 and over, diabetes and symptoms of ischaemic heart disease. These investigations are repeated every five years as surveillance while awaiting transplantation (or more frequently as per cardiology advice) but the utility of this approach has not been investigated. The aim of this single-centre retrospective study was to determine if routine pre-operative MPS are associated with post-transplant complications among asymptomatic high-risk candidates.

METHODS. Data was extracted from hospital informatics systems for all kidney allograft recipients transplanted at our centre between 2007 and 2018. Electronic patient records were then manually searched for the most-up-to-date pre-operative myocardial perfusion scan to facilitate data linkage. We excluded recipients with missing pre-operative MPS reports (predominantly due to ineligibility as highlighted above, symptomatic and referred to cardiology or external referrals for transplantation). Data with regards to hospitalisation episodes were extracted from Hospital Episode Statistics, a national administrative database of secondary care admissions. Mortality, graft loss, delayed graft function, 1-year rejection and 1-year creatinine values were crosschecked with the UK Transplant Registry.

RESULTS. Our total cohort for analysis included 396 kidney transplant recipients who had available reports on pre-operative MPS and linked data for post-transplant clinical outcomes. The study cohort comprised the following characteristics; median recipient age 56 years (IQR 50-62), male recipients 59.2%, non-whites 39.5%, median BMI 28.0 (IQR 24.2-31.7), recipient diabetes 14.9% and previous myocardial infarct 4.4%. ECG changes and symptoms during myocardial perfusion scanning occurred in 8.7% and 7.0% of recipients pre-operatively respectively (both occurred in 0.8% of recipients only). Recipients with versus without previous myocardial infarct had a trend towards having symptoms during MPS (18.8% versus 6.5% respectively, $p=0.091$). Recipients aged 50 and over were significantly more likely than younger recipients to have a higher than median DUKE pre-test probability score (61.5% versus 30.9% respectively, $p<0.001$). With regards to clinical outcomes, neither ECG changes or symptoms during myocardial perfusion scanning or DUKE pre-test probability were associated with risk for re-hospitalisation within 90-days post-surgery, any post-transplant hospitalisation with a cardiac event, death or graft loss.

DISCUSSION. In our retrospective cohort analysis, we demonstrated incidental abnormalities can be detected on MPS performed among selected high-risk transplant candidates. However, we did not identify any association between these pre-operative MPS and post-transplantation clinical outcomes. Limitations of our analysis include our cohort possibly being under-powered and subject to type 2 statistical error; for example, some outcomes were clinically significant but lacked statistical significance. In addition, confounding factors such as cardiology reviews, pharmacological therapy and/or coronary intervention have not been factored into our analysis. Further work is warranted to investigate the value of routine pre-

operative non-invasive cardiac imaging among kidney transplant recipients and whether more targeted assessment is warranted.